



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/666,922

09/18/2003

Yulun Wang

022001-000940US

6483

26182

7590

08/23/2005

PATENT DEPARTMENT
INTUITIVE SURGICAL INC.
950 KIFER ROAD
SUNNYVALE, CA 94086

EXAMINER

HOLLOWAY III, EDWIN C

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/666,922

Applicant(s)

WANG ET AL.

Examiner

Edwin C. Holloway, III

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-32 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 10-22 is/are allowed.
6) ☒ Claim(s) 23-32 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-22-05.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Examiner's Response

1. In response to applicant's amendment filed 6-10-05, all the amendments to the specification and claims have been entered. The examiner has considered the new presentation of claims and applicant's arguments in view of the disclosure and the present state of the prior art. And it is the examiner's opinion that the claims are unpatentable for the reasons set forth in this Office action:

Terminal Disclaimer

2. The terminal disclaimer filed on 6-10-05 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6642836 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a),

Art Unit: 2635

the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (US 5609560) in combination with Mattson (US 5303148), Murphy (US 5,444,654), or Funda (US 5417210) and further in view of Salazar (US 5774841).

Ichikawa discloses a control system (10) including a master controller (1) comprising a keyboard interface (120) and mouse interface (121) for receiving selection commands and control commands from keyboard (118) and mouse (119). The commands are sent to CPU (111) which converts them into operation or control signals communicated via RS-232 interface (117) to cables (2a,3a,4a,...N) or other link which routes them to the proper control device (2,3,4,...N) using an address generated by the master controller derived from the selection command. See col. 3 line 1 to col. 5 line 10. Ichikawa discloses in col. 4 lines 29-65 that the operator inputs a device name or device number (select command) from the keyboard into the concentrated controller 1 CPU 111 which converts the name or number to a read out ID code from the ID code storing area 112b to be

Art Unit: 2635

transmitted to the selected operation device for selection which is considered to include comparison to a list. The operator inputs an operator signal (control command) from a keyboard or mouse to the concentrated controller CPU 111 which refers to reference information in storing area 112c, which is considered to include comparison to a list, for conversion to an operation information (control signal) to be transmitted to the selected operation device. See col. 4 lines 29-68. The controlled devices (2,3,4,...N) are slaves controller by master CPU (111). See col. 8 lines 26-66. The controlled devices (2,3,4,...N) include a memory such as (212c) of reference information for interpreting signals such as commands which is modeling as best understood. See col. 6 lines 24-31. The controlled devices (2,3,4,...N) store an address or ID code in memory (212b) responsive to address and control over the cable from the CPU. The RS-232 interface can be considered an adaptor and the embodiment in fig. 14 has wireless adaptors. See col. 6 lines 1-23 and col. 14 line 36. The controlled devices are medical devices. See col. 3 lines 21-23.

Ichikawa includes keyboard 118 or mouse 119 for input to the master controller, but lacks the audible inputs including audible select command and audible and audible control command of claims 11 and 15 or speech input or voice recognition of

Art Unit: 2635

claim 17.

Mattson discloses a medical control system with voice recognition circuits to allow a surgeon or other medical personal to operate a device without compromising sterile conditions by touching a keyboard. The system includes comparison of the input command to a list to check for validity of the words and legality of the command to assure proper operation. If the command is legal, it is executed to cause commencement and/or termination of the appropriate action by the volume imager or other selected system components. See the abstract, col. 1 lines 40-47 and col. 5 lines 36-68. The inclusion of "corresponding device" in col. 4 line 60, "other system components" in col. 4 line 62 and "other selected system components" in col. 5 line 62, at least suggests a select command for selecting other devices as in Ichikawa.

Murphy discloses a medical machine control system with voice recognition circuits to allow unassisted operator control without aid of a keyboard or foot switch. The speech recognition circuit is on an add-in card for a PC-AT computer or VME bus and the recognition compares input commands to a vocabulary or list of reference commands on a removable memory such as a disc or other memory. See the abstract, col. 2, and cols. 7-8. Select inputs to select subgroups of commands is

Art Unit: 2635

discussed in at least cols. 2-3. Voice may be the only mode of control as specified in col. 6.

Funda discloses a medical instrument control system with voice recognition circuit 267 with vocabulary to allow an unassisted operator to control the system of plural medical devices using voice or any appropriate input. Funda includes "select commands" in col. 7 line 2. See the abstract, col. 5 line 3 - col. 7 line 45, col. 9 line 59 - col. 10 line 2, col. 12 lines 40-43 and 60-61.

Salazar discloses an analogous art voice control system for a plurality of devices including robots and medical device in which the user enables the speech recognition unit by saying "voice command" and then "activate" prior to input of voice commands in col. 6 lines 19-22 and fig. 5A to prevent inadvertent activation of the unit into the operations mode. Messages relating to selection of devices and control of the devices are included in col. 12 lines 5-27, col. 14 lines 6-28 and col. 18 lines 1-18 and figs. 5B, 9 and 10. A medical embodiment with plural controlled devices is included in col. 16 line 22 - col. 17 line 45 and fig. 4.

Regarding claims 23-19, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included audible input or voice recognition including

Art Unit: 2635

comparison to a list or vocabulary of valid audible inputs in the controller of Ichikawa because Mattson, Murphy or Funda disclose that it is desirable in an analogous art medical control system to include such conventional voice recognition operation to allow an unassisted operator to control the system fully or partially without the contamination by touching a keyboard. The comparison to a list or vocabulary assures proper operation as disclosed in Mattson, Murphy and/or Funda, and it would have been obvious to have applied this to both the select command and control command inputs of Ichikawa since Mattson discloses that it is desirable to control "other selected system components" in responds to proper input match, because Mattson include a multiple input process with groups and subgroups of lists corresponding to the two step select and command input of Ichikawa and/or because Funda includes plural devices and "select commands" in col. 7 line 2. Regarding claim 28, the applied reference are all directed to control of medical devices and any medical devices in claim would have been obvious devices to be selected and controlled in view of the plurality of medical devices in the applied art in order to provide complete medical care of a patient. Regarding claim 29, feedback is provided in at least element 64 of Matson.

6. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being

Art Unit: 2635

unpatentable over Ichikawa (US 5609560) in combination with Mattson (US 5303148), Murphy (US 5,444,654), or Funda (US 5417210) as applied above and further in view of Arpin (US 4750136), Baum (EP 0 424 687) and Watanabe (US 4624011).

Arpin discloses an analogous art communication system with self-initialization where at startup the system controller receives and stores an ID or select code from each controlled circuit board or device with the address of the corresponding port. See the abstract and fig. 3, cols. 1-2 and 5-6.

Baum discloses a control system (320) including a master controller comprising a control console keypad (52), foot switch (240), remote controller (370) and expansion I/O board for receiving selection commands and control commands as discussed page 7 col. 1 line 33 - page 8 col. 1 line 14. The commands are received CPU (324) which converts then into signals communicated over bus (340) which routes them to the proper control board (347,348,349,350) to control the selected device. See page 8 col. 2 line 54 - page 13 col. 2 line 27. Both the foot switch and the remote controller can input select command and control commands.

Watanabe discloses using phoneme data in a speech recognition system for recognizing words with high precision. See the abstract and col. 1.

Art Unit: 2635

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in the combination applied above the limitation of registration or initialization where at startup the system controller receives and stores an ID or select code and address from each controlled circuit board or device as disclosed in analogous art by Arpin in order to allow automatic recognition of devices when the system is modified or expanded. Such expansion or plug in circuit boards in a medical system would have been obvious in view of Baum disclosing such plug in boards in a medical system with a central controller for controlling a plurality of controlled devices which would allow reconfiguration of the system on order to provide the operating devices required by the surgeon. Phoneme representation of the device name would have been obvious in view of Watanabe disclosing using phoneme data in a speech recognition system for recognizing words with high precision.

Allowable Subject Matter

7. Claims 10-22 are allowed.

Response to Arguments

8. Applicant's arguments with respect to claims 23-32 are have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

CONTACT INFORMATION

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact an Electronic Business Center (EBC) representatives at 703-305-3028 or toll free at 866-217-9197 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at ebc@uspto.gov. The Patent EBC is a complete customer service center that supports all Patent e-business products and service applications. Additional information is available on the Patent EBC Web site

Art Unit: 2635

at <http://www.uspto.gov/ebc/index.html>.

Any inquiry of a general nature should be directed to the Technology Center 2600 receptionist at (571) 272-2600.

Prior to July 15, 2005, facsimile submissions may be sent via central fax number (703) 872-9306 to customer service for entry by technical support staff. Questions related to the operation of the facsimile system should be directed to the Electronic Business Center at (866) 217-9197. On July 15, 2005, the Central FAX Number will change to 571-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005. After September 15, 2005, the old number will no longer be in service and 571-273-8300 will be the only facsimile number recognized for "centralized delivery".

CENTRALIZED DELIVERY POLICY: For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number. Inquiries concerning only hours and location of the Customer Window may be directed to OIPE Customer Service at (703) 308-1202.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin C. Holloway, III whose telephone number is (571) 272-3058. The examiner can normally be reached on M-F (8:30-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068.

EH
8/20/05


EDWIN C. HOLLOWAY, III
PRIMARY EXAMINER
ART UNIT 2635